ABSTRACT OF THE DISCLOSURE

A semiconductor device is proposed which includes: a semiconductor substrate of a first conductivity type; a channel region formed at a surface of the semiconductor substrate; source and drain regions of a second conductivity type formed at both sides of the channel region in the semiconductor substrate; an insulating layer covering the channel region; and a gate electrode formed on the insulating layer, the insulating layer containing impurity atoms in such a manner that a concentration thereof is non-uniformly distributed along a surface parallel to the semiconductor substrate.